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09/835,128	04/16/2001	Takeshi Kubo	614.1897C	8149

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EXAMINER

LAFORGIA, CHRISTIAN A

ART UNIT	PAPER NUMBER
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2131

DATE MAILED: 07/20/2004

16

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/835,128

Applicant(s)

KUBO ET AL.

Examiner

Christian La Forgia

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-150 is/are pending in the application.
- 4a) Of the above claim(s) 1-75 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 101-104 is/are allowed.
- 6) ☒ Claim(s) 76-100 and 105-150 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

1. The amendment filed on 21 April 2004 is noted and made of record.
2. Claims 1-150 are been presented for examination.
3. Claims 1-75 have been cancelled as per Applicant's request.

***Terminal Disclaimer***

4. The terminal disclaimer filed on 21 April 2004 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent No. 6,367,015 has been reviewed and is accepted. The terminal disclaimer has been recorded.

***Response to Arguments***

5. Applicant's arguments filed 21 April 2004 have been fully considered but they are not persuasive.
6. As per the Applicant's argument that McCall does not teach the specifying member of the presently claimed invention, the Examiner respectfully disagrees. The Applicant is reminded that although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Thus, as the Examiner pointed out in the first office action, dated 22 January 2004, and supported by McCall, column 3, lines 57-60, the user specifies the coordinates by touching the touch screen. Furthermore, it is well known in the art to provide a stylus or pen to enter information via a touch screen, as at least evidenced by U.S. Patent Nos. 5,297,202 and 5,195,133. Therefore, McCall discloses using a specifying member, which is placed on the touch sensor and specifies a plurality of discontinuous different coordinates.

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7. As per the Applicant's argument that Filliman does not teach the specifying member of the presently claimed invention, the Examiner respectfully disagrees. The Applicant is reminded that although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Thus, as the Examiner pointed out in the first office action, dated 22 January 2004, and supported by Filliman, column 1, lines 26-67, the user specifies the coordinates by touching the touch screen and using the light pen. Furthermore, it is well known in the art to provide a stylus or pen to enter information via a touch screen, as at least evidenced by U.S. Patent Nos. 5,297,202 and 5,195,133. Therefore, Filliman discloses using a specifying member, which is placed on the coordinate detector, said specifying member being independent of a detecting unit and specifying a plurality of discontinuous different coordinates.

8. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, there is knowledge generally available to those of ordinary skill in the art.

9. See further rejections that follow.

***Claim Rejections - 35 USC § 102***

10. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

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11. Claims 76, 78, 80, 81, 84, 85, 87, 88, 90, 91, 93, 94, 97, 98, 100, 105, 107, 108, 110, 111, 114, 115, 117-121, 123, 124, 125, 127, 129, 136, and 142-150 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 5,970,146 to McCall et al., hereinafter McCall.

12. As per claims 76, 88, 105, 121, 129, and 136, McCall teaches an authentication apparatus comprising:

a touch sensor configured to detect a plurality of coordinates, input via a specifying member which is placed on the touch sensor and specifies a plurality of discontinuous different coordinates (Figures 1 [blocks 12, 14], 2; column 4, lines 21-43);

a comparing unit configured to compare the plurality of detected coordinates and a plurality of registered coordinates and to output a compared result (column 1, lines 1-24; column 4, lines 2-5); and

an authentication unit configured to carry out an authentication based on the compared result (column 1, lines 1-24). The touch screen disclosed in McCall corresponds to the Applicant's detector. A PIN is entered via the touch screen, which corresponds to the Applicant's coordinates. The Applicant's specifying member is drawn to entering the PIN using one's finger on the touch screen. Authentication is disclosed in column 1, lines 1 through 24, and McCall inherently teaches that the PIN is compared with a stored PIN in order to authorize payment.

13. Regarding claims 78, 90, 107, 123, and 124, McCall teaches wherein said specifying member specifies the plurality of discontinuous different coordinates by a plurality of discontinuous holes or openings, cutouts or marks (column 1, lines 8-24). McCall teaches

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entering a PIN via the touch screen where there are gaps between the numbers that correspond to discontinuous openings between where the user touched their finger.

14. Regarding claims 80, 93, and 110, McCall teaches wherein the specifying member is placed on a specified region of the touch sensor (column 3, line 56 to column 4, line 5).

15. With regards to claims 81, 94, and 111, McCall teaches wherein the holes or openings, cutouts or marks of said specifying member are provided at arbitrary positions (column 3, line 56 to column 4, line 5).

16. Regarding claims 84, 97, and 114, McCall teaches wherein said comparing unit includes a unit part configured to obtain the plurality of registered coordinates from positions and registered patterns, specified by one or more arbitrary ones of the detected coordinates (column 3, line 56 to column 4, line 5).

17. Regarding claims 85, 98, 115, and 127, McCall teaches wherein said touch sensor virtually sets a keyboard at a position indicated by one or a plurality of arbitrary inputs via the specifying member which is placed on said touch sensor and specifies the plurality of discontinuous different coordinates, and detects a code corresponding to each key located at a position where the one or plurality of arbitrary inputs are made based on the virtually set keyboard, and said comparing unit compares each detected code with registered codes (Figure 2 [block 26]; column 4, lines 21-43).

18. Regarding claims 87, 100, 117, and 128, McCall teaches wherein said touch sensor is provided in display means (Figure 1 [blocks 12, 14, 26]; column 2, lines 59-65).

19. Regarding claims 91 and 108, McCall teaches wherein said carrying out of said authentication step compares an order of the plurality of detected coordinates and an order of the plurality of registered coordinates and carries out the authentication based on a compared result of the orders (column 3, line 56 to column 4, line 5).

20. As per claims 118, 119, 120, and 125, McCall teaches an authentication apparatus comprising:

a touch sensor configured to detect a plurality of coordinates, input via a specifying member which is placed on the touch sensor and specifies a plurality of discontinuous different coordinates (Figures 1 [blocks 12, 14], 2; column 4, lines 21-43);

a comparing unit configured to compare an order of the plurality of detected coordinates and an order of a plurality of registered coordinates and to output a compared result of the orders (column 1, lines 1-24; column 4, lines 2-5); and

an authentication unit configured to carry out an authentication based on the compared result (column 1, lines 1-24). The touch screen disclosed in McCall corresponds to the Applicant's detector. A PIN is entered via the touch screen, which corresponds to the Applicant's coordinates. The Applicant's specifying member is drawn to entering the PIN using one's finger on the touch screen. Authentication is disclosed in column 1, lines 1 through 24,

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and McCall inherently teaches that the PIN is compared with a stored PIN in order to authorize payment.

21. As per claims 142, 145, and 148, McCall teaches an authentication apparatus, comprising:

a touch sensor detecting coordinates, input via a specifying member, which specifies a plurality of discontinuous different coordinates (Figures 1 [blocks 12, 14], 2; column 4, lines 21-43); and

a processing unit determining a relationship between the plurality of detected coordinates and a plurality of registered coordinates (Figure 1 [block 16]; column 4, lines 2-19).

22. Regarding claims 143, 146, and 149, McCall teaches wherein said processing unit further comprises:

a comparing unit configured to compare the plurality of detected coordinates and the plurality of registered coordinates and outputting a compared result (Figure 1 [block 16]; column 4, lines 2-19), and

an authenticating unit configured to authenticate based on the compared result (Figure 1 [block 16]; column 4, lines 2-19). Authentication is disclosed in column 1, lines 1 through 24, and McCall inherently teaches that the PIN is compared with a stored PIN in order to authorize payment

23. Regarding claims 144, 147, and 150, McCall teaches wherein said processing unit further comprises:



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a comparing unit configured to compare an order of the plurality of detected coordinates and an order of the plurality of registered coordinates and outputting a compared result of the orders (Figure 1 [block 16]; column 4, lines 2-19), and

an authenticating unit configured to authenticate based on the compared result (Figure 1 [block 16]; column 4, lines 2-19). Authentication is disclosed in column 1, lines 1 through 24, and McCall inherently teaches that the PIN is compared with a stored PIN in order to authorize payment.

***Claim Rejections - 35 USC § 103***

24. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

25. Claims 77, 89, 106, 122, and 137 through 141 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,656,662 to Filliman et al., hereinafter Filliman.

26. As per claims 77, 89, and 122, Filliman teaches an authentication apparatus, comprising:  
a touch sensor configured to detect a plurality of coordinates, input by a pointing device, via a specifying member which is placed on the touch sensor and specifies a plurality of discontinuous different coordinates (Abstract; column 7, lines 30-62);

a comparing unit configured to compare the plurality of the detected coordinates and a plurality of registered coordinates and to output a compared result (claim 9); and  
an authentication unit configured to carry out an authentication based on the compared result (column 3, lines 4-16). The coordinates being inputted are pixels on a CRT screen and are discrete, or discontinuous. A light pen and hand are used as the two devices used to supply discontinuous coordinates. Column 3 of Filliman discloses the identification method disclosed

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can be applied to automated teller machines which require an authorization step. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the identification method as taught by Filliman to an authentication method.

27. As per claims 106, 137, 139, and 141, Filliman teaches computer readable storage medium storing a program to make a computer perform an authentication by:

detecting a plurality of coordinates, input by a pen, via a specifying member which is placed on a touch sensor and specifies a plurality of discontinuous different coordinates (Abstract; column 7, lines 30-62);

comparing the plurality of the detected coordinates and a plurality of registered coordinates and outputting a compared result (claim 9); and

authenticating based on the compared result (column 3, lines 4-16). The coordinates being inputted are pixels on a CRT screen and are discrete, or discontinuous. A light pen and hand are used as the two devices used to supply discontinuous coordinates. Column 3 of Filliman discloses the identification method disclosed can be applied to automated teller machines which require an authorization step. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the identification method as taught by Filliman to an authentication method.

28. As per claims 138 and 140, Filliman teaches user authentication method comprising:

detecting a plurality of coordinates, input from a coordinate detector, via a specifying member which is placed on the coordinate detector, said specifying member being independent

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of a detecting unit and specifying a plurality of discontinuous different coordinates (Abstract; column 7, lines 30-62);

comparing the plurality of the detected coordinates and a plurality of registered coordinates and outputting a compared result (claim 9); and

carrying out an authentication based on the compared result (column 3, lines 4-16). The coordinates being inputted are pixels on a CRT screen and are discrete, or discontinuous. A light pen and hand are used as the two devices used to supply discontinuous coordinates. Column 3 of Filliman discloses the identification method disclosed can be applied to automated teller machines which require an authorization step. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the identification method as taught by Filliman to an authentication method.

29. Claims 79, 82, 83, 86, 92, 95, 96, 99, 109, 112, 113, 116, and 126 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCall.

30. Regarding claims 79, 92, 109, and 126, McCall does not disclose a judging unit configured to judge an end of the input of the plurality of detected coordinates when an input interval of the plurality of detected coordinates is longer than a predetermined interval or the input interval of the plurality of detected coordinates is longer than an average value of the input interval. The Examiner takes official notice of the practice of "timing out" authentication procedures. It would be obvious for one of ordinary skill in the art to employ such a timeout in the invention of McCall in order to thwart brute-force combination attacks.

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31. Regarding claims 82, 95, and 112, McCall does not disclose wherein the specifying member is placed in a specified region which is arbitrarily movable on said touch sensor.

McCall teaches that the keypad produced is displayed on the screen by a computer, see column 1, lines 13-24. McCall fails to specify a particular location for the keypad. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide for the keypad to be movable. See MPEP § 2144.04. See also *In re Japikse*, 181 F.2d 1019, 1023, 86 UPSQ 70, 73 (CCPA 1950).

32. Regarding claims 83, 96, and 113, McCall does not disclose a registering unit configured to register user levels and a manager level which is common to all of the user levels, with respect to the plurality of registered coordinates, registered coordinate patterns or registered code values. The widespread practice of giving more managers more authority than typical users in order that they may perform tasks such as maintenance and/or repair work in addition to normal user tasks is well known and practiced in the art. It would be obvious for one of ordinary skill in the art to add this feature in McCall because the terminals disclosed in column 1 of McCall require maintenance and supervisory authority from time to time.

33. Regarding claims 86, 99, and 116, McCall does not disclose wherein said touch sensor detects resistances corresponding to the coordinates input from a resistor layer type touch sensor via the specifying member, and said comparing unit compares the plurality of detected coordinates and the registered coordinates by comparing the detected resistances and registered resistances. Resistor layer type touch sensors are a well-known, inexpensive type of touch

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sensor known in the art. It would have been obvious to one of ordinary at the time the invention was made to provide for a resistor type detector as it would cut down on cost, in turn saving money.

34. Claims 130-135 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCall in view of Filliman.

35. Regarding claim 130, McCall does not teach which further comprises a pointing member, and said touch sensor detects coordinates input by said pointing device via said specifying member.

36. Filliman teaches which further comprises a pointing member, and said touch sensor detects coordinates input by said pointing device via said specifying member (column 7, lines 30-62). Filliman discloses the use of a light pen which can be drawn to the pointing member and the user's hand acts as a specifying member. It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the identification method of Filliman on the system of McCall in order to verify the identity of the entity requiring completion of the requested transaction.

37. With regards to claims 131-135, Filliman teaches wherein said pointing device comprises pen or a stylus (column 7, lines 53-62).

***Allowable Subject Matter***

38. Claims 101-104 allowed.

39. The following is an examiner's statement of reasons for allowance:

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It is well known and documented in the art to have an authentication apparatus comprising a touch sensor and a user authentication card.

There are no teachings in the prior art of a user authentication card being placed on the touch sensor when inputting a plurality of discontinuous different coordinates for user authentication, wherein the user authentication card comprises a plurality of perforated parts, each of perforated parts removed by punching forming a hole which is used when inputting the plurality of discontinuous different coordinates to the touch sensor. Since no teachings or motivation can be found of placing a user authentication card on the touch sensor when inputting a plurality of discontinuous different coordinates for user authentication, wherein the user authentication card comprises a plurality of perforated parts, each of perforated parts removed by punching forming a hole which is used when inputting the plurality of discontinuous different coordinates to the touch sensor.

40. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### *Conclusion*

41. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

42. The following patents are cited to further show the state of the art with respect to authentication using a card, such as:

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United States Patent No. 6,484,936 to Nicoll et al., which is cited to show holding an authentication card to a magnetic reader.

43. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

44. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


45. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christian La Forgia whose telephone number is (703) 305-7704. The examiner can normally be reached on Monday thru Thursday 7-5.

46. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (703) 305-9648. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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47. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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